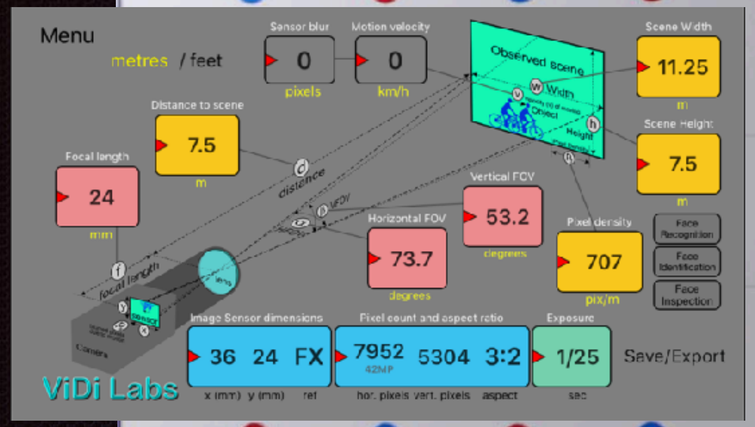
# Image of a photographic camera (7RII)



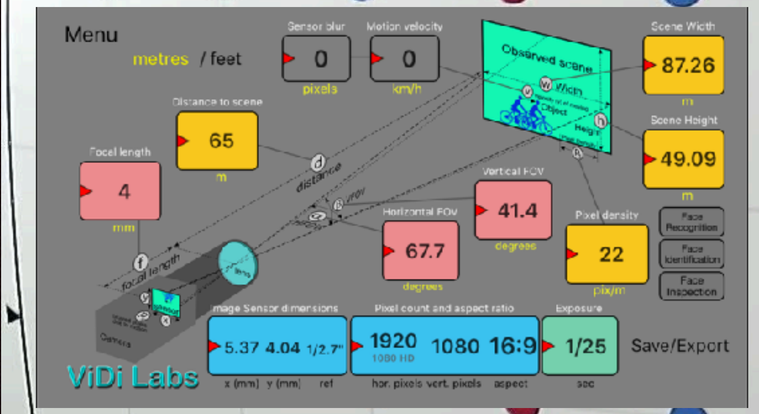

1120 mm

Camera Sony Alpha 7RII  full frame sensor (36mm x 24mm)  lens = 24mm  distance = 75cm

Calculated HFOV angle = 2 arctg (560/750) = 73.5˚  ViDiLabs calc = 73.7˚

# Image of an IP CCTV camera 1/2.7” with 4mm lens

1120 mm




X Camera 1/2.7" sensor (5.4mm x 4mm) lens = 4mm distance = 63cm

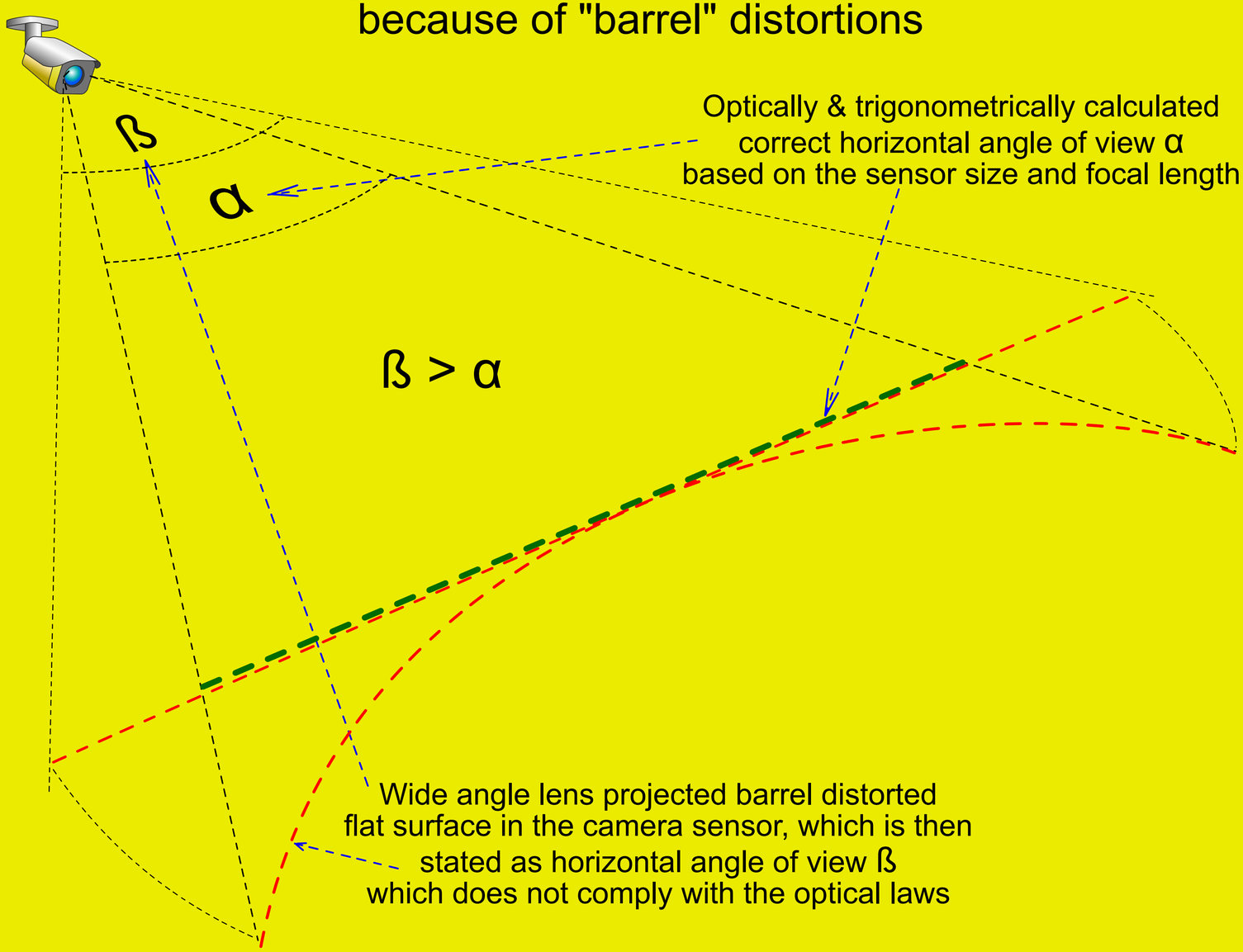
Calculated HFOV = 2 arctg (560/630) = 83.3˚ ViDiLabs calc = 67.7˚ spec = 82˚

# Manufacturer’s specification

| | | | |
|---|---|---|---|
| Lens | 4.0mm@F1.6 | | |
| DORI Distance | Lens | Detect(m) | Observe(m) |
| | 4mm | 64.3 | 25.7 |
| | | | |
| Angle of view(H) | 82° | **Calculated 83.3˚ Should be 67.7˚** | |
| Angle of View (V) | 41.4 | | |

# Explanation

Wide angle lenses discrepancy with optical laws
because of "barrel" distortions



# Wide angle lens distortions

Not all wide angle lenses produce such “barrel” distortions.

A common example of good quality wide angle optics are smart phones, which we have also tested.

They fully comply with the ViDiLabs calculations, as any good optics should.

Sadly, the lack of education in the CCTV industry, and the battle for the “cheapest” allows for accepting inferior optics.

**Please be aware of wide angle lenses and the possible distortions.**

# Thank you for your attention

## Q & A time

ViDiLabs calculator